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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,751

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EXAMINER

CHU, RANDOLPH I

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,751	Applicant(s) NAKAJIMA ET AL.	
	Examiner Randolph Chu	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/5/2004, 11/18/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 9-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 9-12 are all directed to a distributed software agent. "Computer program" refers to software, which is functional descriptive material, which per se is nonstatutory. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4, 5, 6, 8, 9, 10, 12, 13, 14 and 16 are rejected under 35

U.S.C. 102(e) as being anticipated by Berkner et al. (US 2003/0086623).

With respect to claim 1 Berkner et al. teaches,

a defect-detecting signal generating section to scan the image with a defect detecting light, so as to generate defect detecting signals (scanned image that contains a blurred version of original image), which can be employed for detecting a defect of the image (in order to correct blurring, it need to be detected) (para. [0007]);

a converting section to apply a multiple-resolution conversion processing (DWT process) to the defect detecting signals, generated by the defect-detecting signal generating section, so as to decompose the defect detecting signals into multiple-resolution signal components (Fig. 1B, para. [0196-0200]); and

a recognizing section to recognize (characterize) a presence or absence of the defect in the image, based on the multiple-resolution signal components decomposed by the converting section (Fig. 1B, para. [0200]).

With respect to claim 2, Berkner et al. teaches that multiple-resolution conversion processing is a Dyadic Wavelet transform (discrete wavelet transform), and the multiple-

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resolution signal components include at least a high frequency band component (para. [0196-0200]).

With respect to claim 4, Berkner et al. teaches a compensating section to compensate for the defect of the image recognized by the recognizing section (Fig 1B, ref. no. 123).

With respect to claim 13, Berkner et al. teaches
an image-processing section to process image signals acquired by scanning an image, recorded on a recording medium, with an image reading light (Fig. 39, ref no 3912 and para. [0007]); and

an image-recording section to record the reproduced image onto a outputting medium (Fig. 39, ref no 3907)

the image-processing section includes:

a defect-detecting signal generating section to scan the image with a defect detecting light, so as to generate defect detecting signals (scanned image that contains a blurred version of original image), which can be employed for detecting a defect of the image (in order to correct blurring, it need to be detected) (para. [0007]);

a converting section to apply a multiple-resolution conversion processing (DWT process) to the defect detecting signals, generated by the defect-detecting signal generating section, so as to decompose the defect detecting signals into multiple-resolution signal components (Fig. 1B, para. [0196-0200]); and

a recognizing section to recognize (characterize) a presence or absence of the defect in the image, based on the multiple-resolution signal components decomposed by the converting section (Fig. 1B, para. [0200]).

With respect to claim 5, please refer to rejection for claim 1.

With respect to claim 6, please refer to rejection for claim 2.

With respect to claim 8, please refer to rejection for claim 4.

With respect to claim 9, please refer to rejection for claim 1.

With respect to claim 10, please refer to rejection for claim 2.

With respect to claim 12, please refer to rejection for claim 4.

With respect to claim 14, please refer to rejection for claim 2.

With respect to claim 16, please refer to rejection for claim 4.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 7, 11 and 15 are rejected under 35 USC 103(a) as being unpatentable over Berkner et al. (US 2003/0086623) in view of Maruo (US 6,292,583).

Berkner et al. teaches all the limitations of claim 1 as applied above from which claim 3 respectively depend.

Berkner et al. does not teach expressly that the recognizing section recognizes the presence or absence of the defect in the image by comparing signal intensities of high frequency band components corresponding to at least two levels with respect to a specific pixel, among high frequency band components of every level acquired by applying the Dyadic Wavelet transform.

Maruo teaches the recognizing section recognizes the presence or absence of the defect (detecting defect) in the image by comparing signal intensities (energy) of high frequency band components (HL and LH) corresponding to at least two levels with respect to a specific pixel, among high frequency band components of every level acquired by applying the Dyadic Wavelet transform (2D Wavelet transform) (col. 13 line 3 – col. 14 line 12).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to detect defect by compare high frequency band components in the method of Berkner et al.

The suggestion/motivation for doing so would have been that defect can be detected automatically at high speed (Maruo, abstract and col. 14 lines 8-9).

Therefore, it would have been obvious to combine Maruo with Berkner et al. to obtain the invention as specified in claim 3.

With respect to claim 7, please refer to rejection for claim 3.

With respect to claim 11, please refer to rejection for claim 3.

With respect to claim 15, please refer to rejection for claim 3.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randolph Chu whose telephone number is 571-270-1145. The examiner can normally be reached on Monday to Thursday from 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 571-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RIC/



JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER